

January 20, 2021 Water Supply Forecast Discussion

The [Colorado Basin River Forecast Center \(CBRFC\)](#) geographic forecast area includes the Upper Colorado River Basin, Lower Colorado River Basin, and Eastern Great Basin.

Water Supply Forecast Summary

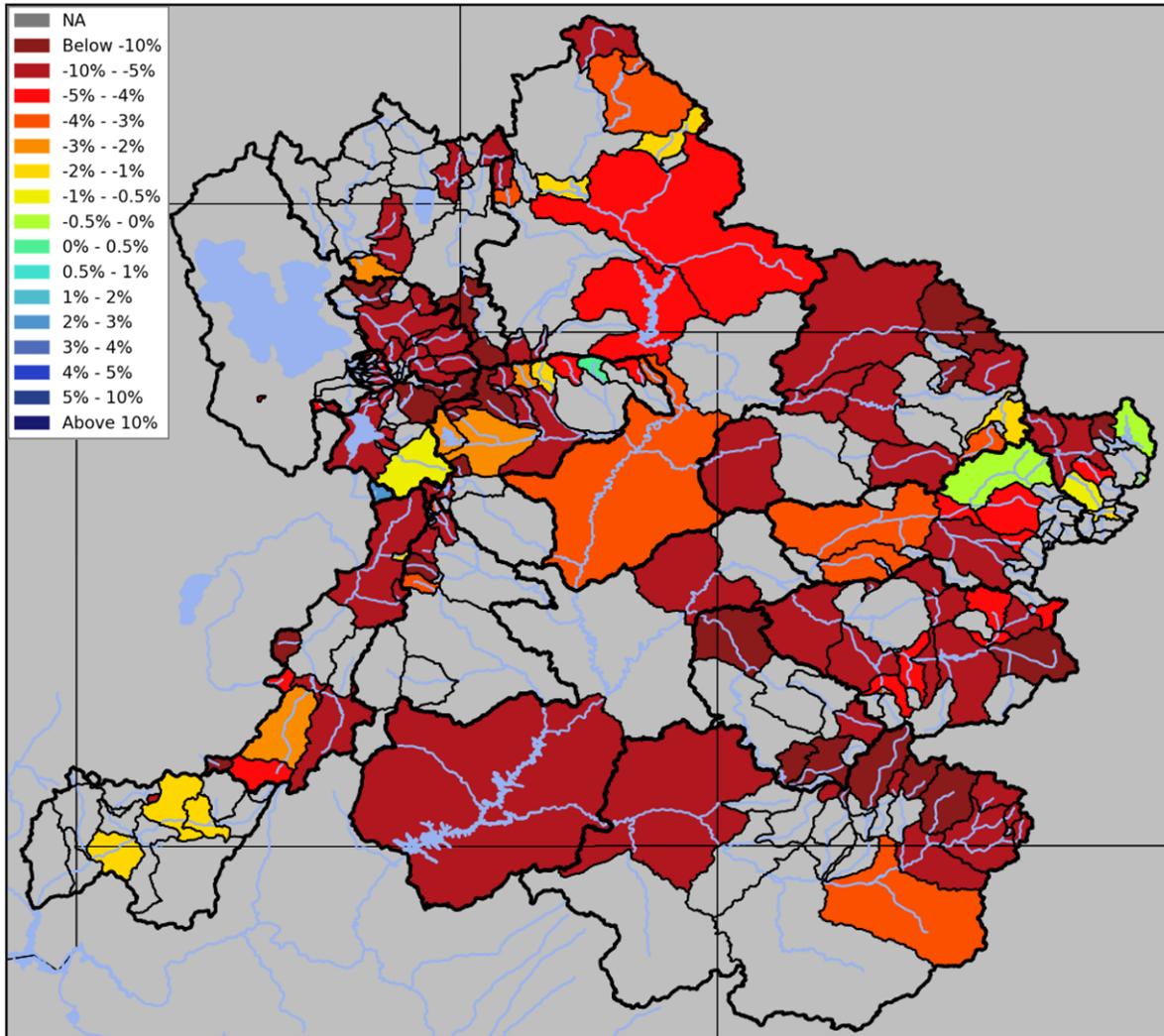
January-to-date observed precipitation has come in well below average across the region with snow water equivalent (SWE) conditions declining in terms of percent of normal (median) since the beginning of the month. The April-July water supply volume guidance continues to be below to much below normal and has generally decreased by 5-20% across the region since the first of January. Below normal soil moisture, precipitation, and SWE conditions are all contributing to low water supply forecasts.

Snow conditions remain mostly below to much below normal throughout the Colorado River Basin and Great Basin. Mid-January SWE conditions generally range between 50-75% of normal across the Upper Colorado River Basin, 50-60% of normal across the Great Basin, and around 40% across southwest Utah (Sevier and Virgin basins). Lower Colorado River Basin SWE conditions are extremely poor at less than 20% of the historical median.

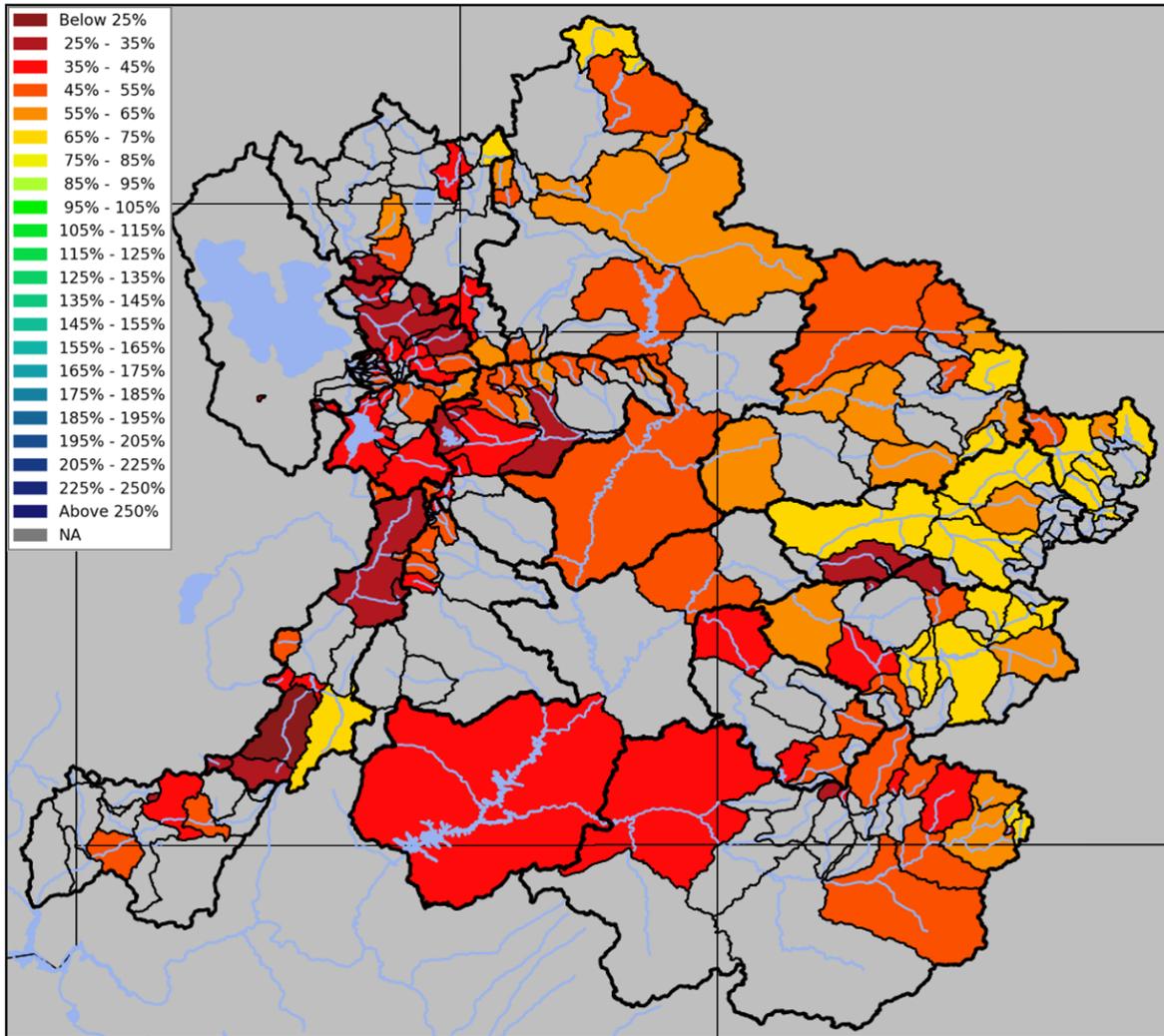
Mid-January April-July unregulated inflow forecasts for some of the major reservoirs in the Upper Colorado River Basin include Fontenelle Reservoir 440 KAF (61% average), Flaming Gorge 550 KAF (56%), Blue Mesa Reservoir 470 KAF (70%), McPhee Reservoir 170 KAF (58%), and Navajo Reservoir 450 KAF (61%). The Lake Powell inflow forecast is 3.45 MAF (48% of average), a five percent decrease from the early January forecast.

The weather will become more active over the next 7-10 days as a series of storm systems move across the region. The development of a large scale trough across the Western U.S. is a welcome change from the ridge that has dominated the winter thus far. The 7-day forecast precipitation totals (through next Tuesday) are showing widespread 1.0-2.5 inches over the mountains of the Great Basin, Upper Colorado River Basin and along the Mogollon Rim in Arizona. The weather pattern shift to a Western trough should deliver much needed precipitation to the region, but it remains to be seen whether this trough pattern will continue into the latter half of next week and the first week of February.

Seasonal Water Supply Forecasts



Trend in the April-July runoff volume forecast guidance from January 1 to January 19, 2021
(Change in April-July percent of average)



April-July runoff volume guidance as of January 19, 2021
(percent of 1981-2010 average)

For specific site water supply forecasts click [here](#).

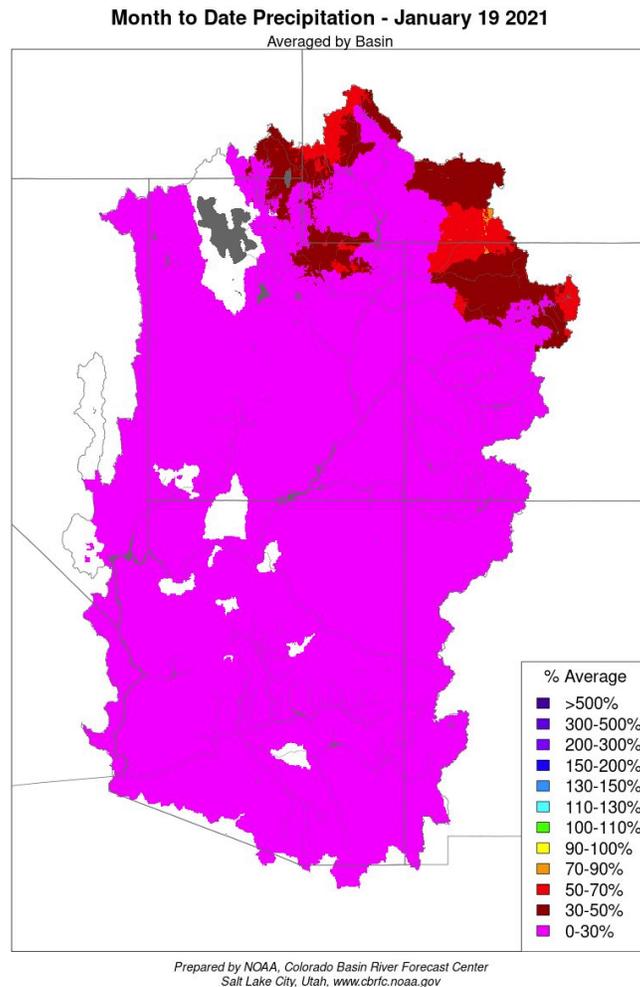
Water Supply Discussion

Weather Synopsis

The stubborn ridge that dominated the weather pattern during December has continued through the first three weeks of January. While a few weak storm systems have moved across the Upper Green, Yampa, and Upper Colorado headwater basins, the majority of the region has experienced a very dry start to January. Weather models indicate the development of a Western U.S. trough over the next 10 days, which will hopefully provide some much needed widespread precipitation to the area.

Precipitation

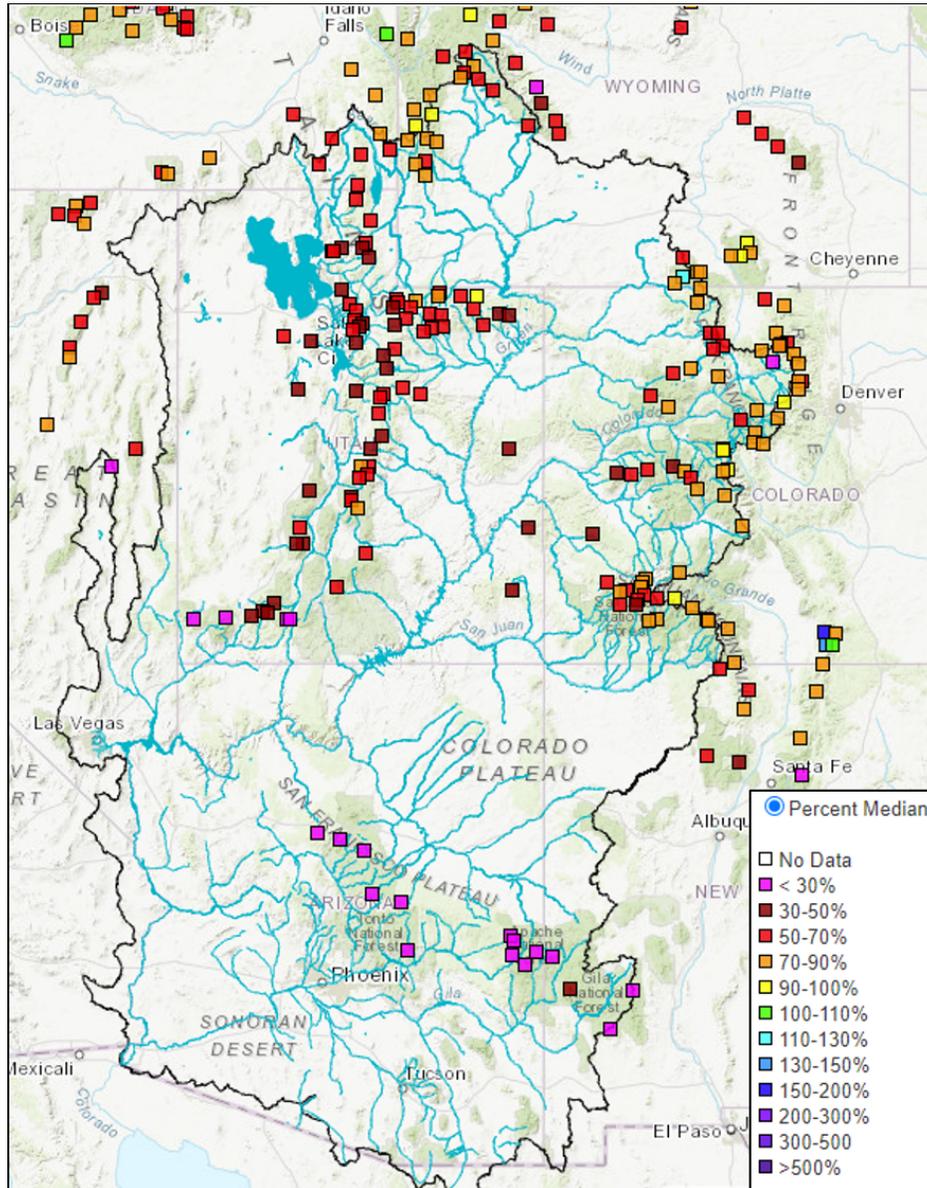
Precipitation during the first half of January was mainly well below normal (0-50% of average), with the exception of the northernmost basins. It was one of the drier first three weeks of January on record, as many SNOTEL stations in the Upper Colorado River Basin and the Great Basin had precipitation totals that ranked in the bottom 5 of historical records that generally span 40+ years. Lower Basin precipitation was also low and generally ranked in the bottom 10 of record for month-to-date precipitation.



January 1-18, 2021 percent of average precipitation

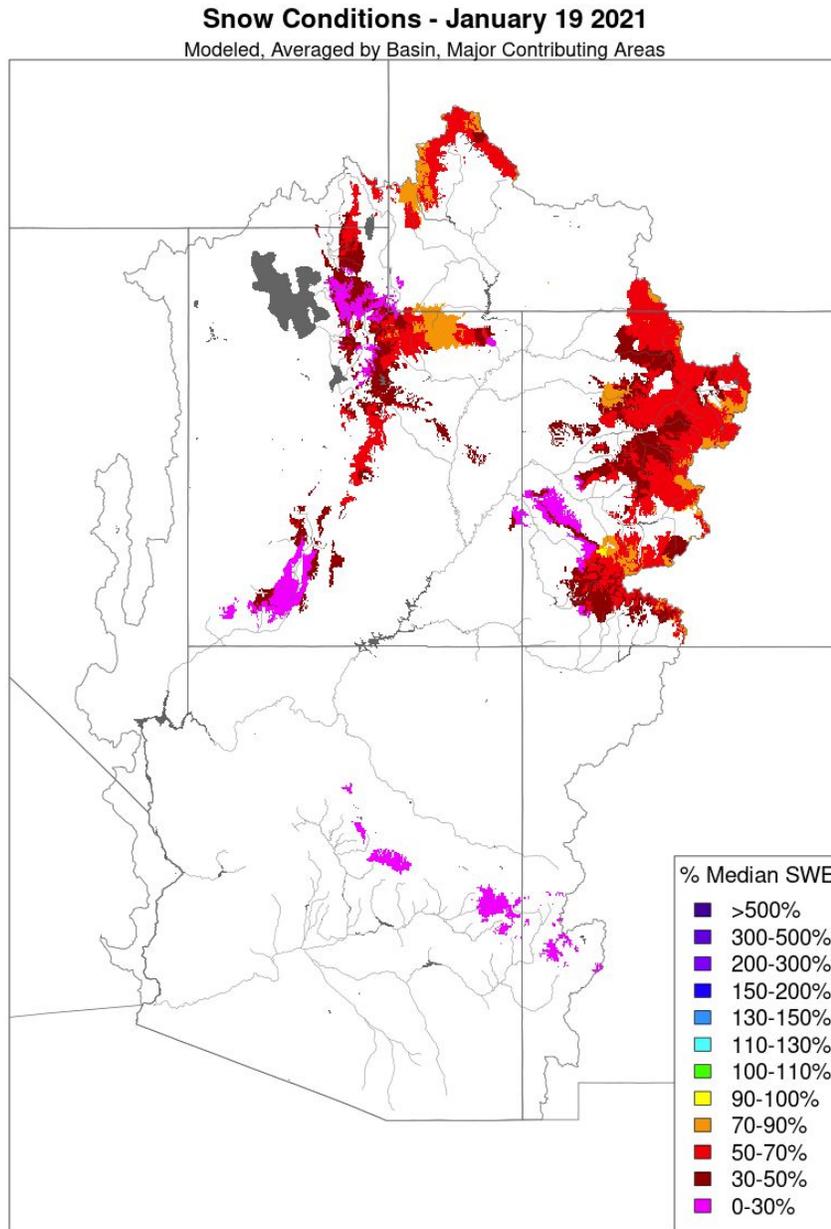
Snowpack

Snow conditions have declined in terms of percent of normal across the region since early January and remain mostly below to much below normal (median) throughout the Colorado River Basin and Great Basin. Mid-January SWE conditions (image below) generally range between 50-75% of normal across the Upper Colorado River Basin, 50-60% of normal across the Great Basin, and around 40% across southwest Utah (Sevier and Virgin basins). Lower Colorado River Basin SWE conditions are extremely poor at less than 20% of the historical median.



SNOTEL percent median snow conditions as of January 19, 2021

The image below is the representation of mid-January CBRFC model snow conditions in areas that provide the greatest contribution to April-July runoff. Model snow conditions closely correlate to SNOTEL conditions throughout the Colorado River and Great Basins.



Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

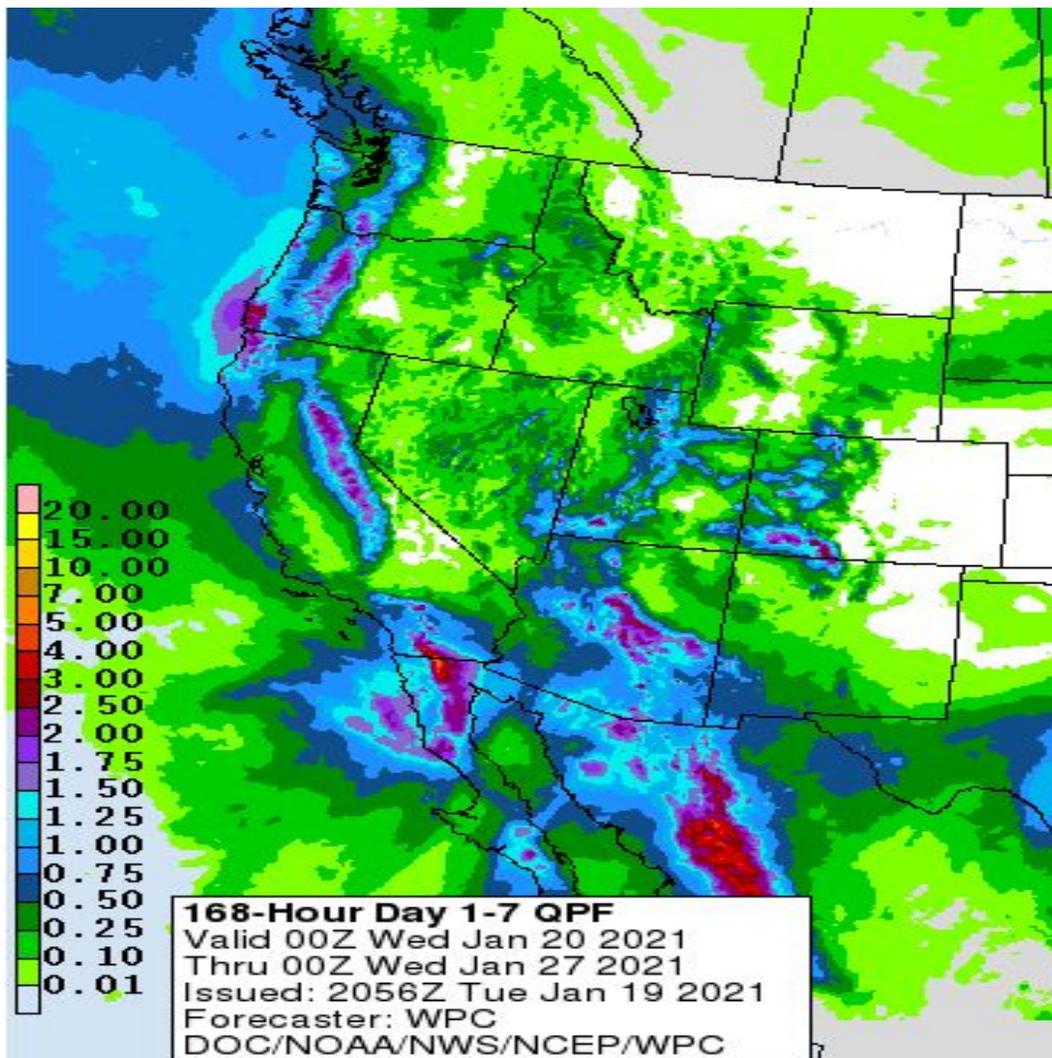
Snow representation from the CBRFC hydrologic model January 19, 2021

For updated SNOTEL information refer to click [here](#).

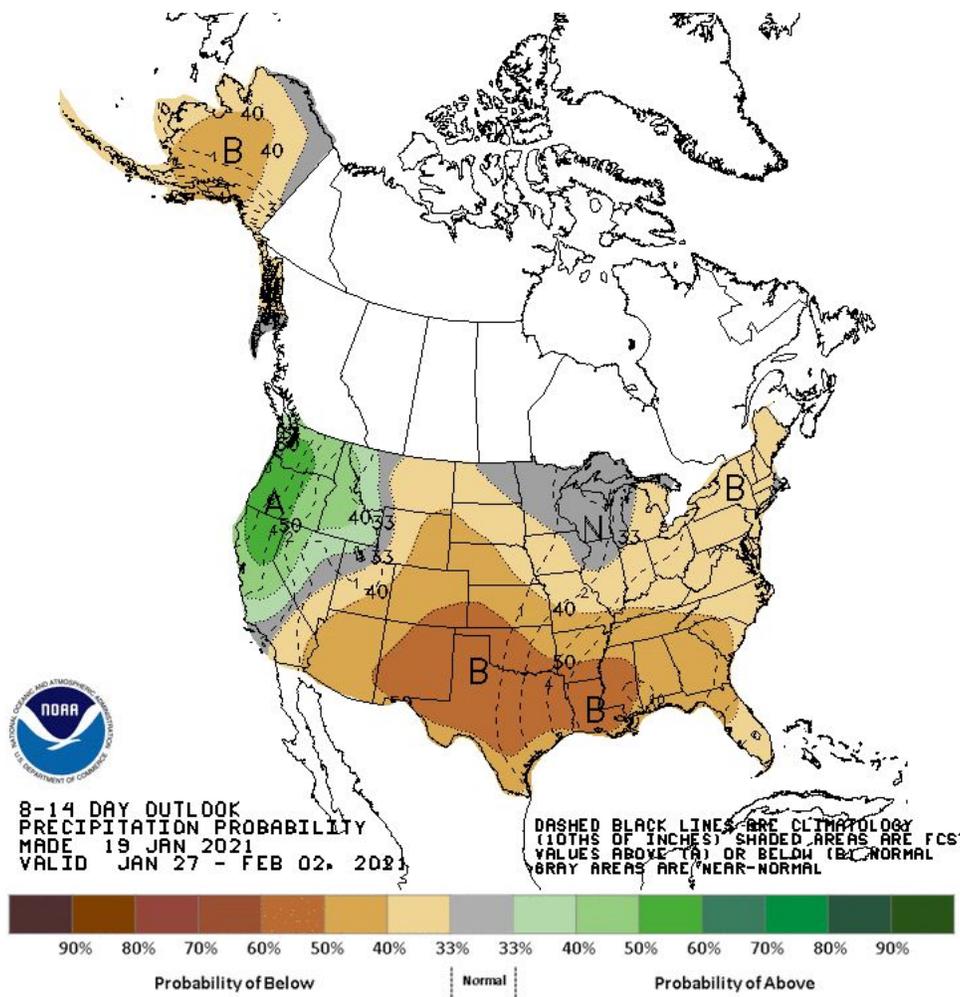
For CBRFC hydrologic model snow click [here](#).

Upcoming Weather

The weather will become more active over the 7-10 days as a series of storm systems move across the region. The development of a large scale trough across the Western U.S. is a welcome change from the ridge that has dominated the winter thus far. The first storm, currently off the Northern Baja coast, will swing into southern Arizona on Thursday, producing widespread 0.50-1.0 inches over the Santa Cruz and San Pedro basins in the Lower Colorado River Basin. A deeper trough is forecasted to follow on Saturday into Sunday with widespread moderate precipitation amounts over much of the Colorado River and Great Basins. Weather models are in rather good agreement at showing a storm system impacting the region on late Monday into Tuesday. The 7-day forecast precipitation totals (through next Tuesday) are showing widespread 1.0-2.5 inches over the mountains of the Great Basin, Upper Colorado River Basin and along the Mogollon Rim in Arizona. Thus, the pattern shift to a Western trough should deliver much needed precipitation to the region. It remains to be seen whether this trough pattern will continue into the latter half of next week and the first week of February. The Climate Prediction Center's 8-14 day outlook features slightly elevated odds for a return to below normal precipitation as the large scale trough shifts off the West Coast.



Weather Prediction Center precipitation forecast for January 20-26, 2021



NWS Climate Prediction Center precipitation probability forecast for Jan 27 - Feb 2, 2021

For CBRFC's beginning of the month online publication that contains basin conditions, summary graphics, and end of month reservoir content tables, refer to the following links.

End Of Month Reservoir Content Tables

- [Green River Basin](#)
- [Upper Colorado River Basin](#)
- [San Juan River Basin](#)
- [Great Salt Lake Basin](#)
- [Sevier Basin](#)

Basin Conditions and Summary Graphics

- [Green River Basin](#)
- [Upper Colorado River Basin](#)
- [San Juan River Basin](#)
- [Great Salt Lake Basin](#)
- [Sevier River Basin](#)

[Virgin River Basin](#)